

REPORT OF A CASE OF GUNSHOT WOUND OF THE THORAX INVOLVING THE HEART.¹

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ON the twenty-sixth day of the third month of the present year, J. F., a laborer, fifty-one years of age, and a Pole by birth, was brought to the hospital by a patrol, seven and a half hours after having received a gunshot wound of the thorax, which was said to have been received accidentally.

I saw the patient about one hour after his admission, at which time he was satisfactorily recovering from shock, temperature being 98° F.; pulse, 96; respirations, 30. Objectively, the man showed nothing remarkable so far as expression was concerned, excepting some pallor noted about the lips and some blanching of the conjunctival surface. He was able to answer such questions as he could be made to understand; the inability, however, to speak his language, as well as the marked defect in his hearing, made anything like a satisfactory history from him impossible.

Inspection at this time showed the wound of entrance of the bullet to be about one and a half inches above the ensiform cartilage, and about the same number of inches to the left of the sternum. The bullet had evidently glanced before penetrating the thorax, as shown by the burned condition of the tissues for fully one-quarter of an inch. There was an immense hæmatoma extending from the posterior axillary line to the nipple-line anteriorly, and from the axilla above to the diaphragm below. Fluid was distinctly felt in the soft tissues external to the ribs.

The patient was reacting so favorably to the usual methods employed in the treatment of shock that there seemed no reason for alarm for fear of consecutive hæmorrhage after the lapse of this number of hours. The treatment, consequently, consisted in placing the patient absolutely at rest in the recumbent position,

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first having rendered the entire thorax perfectly aseptic, dressing the wound with aseptic dressing, and strapping the entire side with broad adhesive strips to favor absorption of the hæmatoma.

From this time on until the afternoon of the first day of the fourth month (which was six days after admission), temperature and pulse ran practically a normal course. On the afternoon of the sixth day, temperature rose to 102° F., pulse to 102, subsiding, however, at midnight of the same day. From this period until the sixth of the month (or the eleventh day after receiving the wound) there were no untoward symptoms. At this time temperature again ran to 102° F., pulse to 102. On the seventh day, temperature had again dropped to normal, pulse to 100, respirations 24. On the morning of the eighth, temperature again rose to 102° F., pulse 92, respirations 20. (This was the fourteenth day.)

At no time after the day of admission were respirations above 24. Urine was voided normally and bowels acted regularly. Only once does the temperature chart show the necessity for administering an enema.

About 7 P.M., on the fourteenth day, when apparently in the very best condition, indeed unwillingly retaining his bed, the patient was attacked with vomiting and died almost instantly.

Autopsy.—The autopsy was made about fourteen hours after death, having been held by the Coroner's physician assisted by the resident, Mr. Davies.

The bullet, a thirty-two caliber, had entered the thorax at a point one and a half to two inches above the ensiform cartilage, and one and a half inches to the left of the sternum, fracturing the rib at that point, passing through the pericardium and through the apex of the heart, making a wound in depth about one-quarter of an inch. It then passed through the pleura and gained exit from the thorax between the sixth and seventh intercostal space, being found in the subcutaneous tissues, after having passed through all the deeper tissues of the back. Its presence could not be early detected on palpation because of the presence of the immense hæmatoma, and later because of its being embedded in organized blood-clot. The entire heart muscle was enveloped within a well organized blood-clot, and about a gallon of serum and blood was removed from the pericardium and pleural cavities. All the other organs were apparently normal.

There were not, from the time of the patient's recovery from shock until his death, any of the cardinal symptoms of wound of the heart present, such as prostration of strength with swooning or syncope, thready or weak and irregular pulse, precordial distress and anxiety, nor dyspnoea, and, in the absence of these, earlier liberty was given both as to moving about in bed, also to diet, than would have been allowed had these symptoms been present to have warned of the nature of the injury. There is much reason for the belief that had the cause of this intercurrent attack of vomiting been averted, the patient would have entirely recovered the injury to his heart. The literature shows a number of cases of bullet wounds of the heart where complete recovery has taken place, and also instances where, owing to entire absence of symptoms that would cause suspicion of involvement of the heart, deaths have occurred that might have been averted.

George Fischer,¹ in his collective report of 452 cases of heart wound, records 380 deaths and seventy-two recoveries. Death was immediate in 104. In 270 it occurred after intervals varying from one hour to nine months. Of this number seventy-two were gunshot wounds, with twelve recoveries; autopsies on several of the cases that had recovered, they having died from other diseases, verified diagnosis made long after the original injury. This circumstance affords good ground for supposing that the others were correctly diagnosed.

P. S. Connor² reports a case of gunshot wound of the heart wherein both ventricles and the right auricle were involved, yet the patient lived three years, two months, and thirteen days.

Steudener³ reports a case of pistol-shot wound of the heart with survival for fifteen weeks. In this case autopsy showed a cicatrix to be present at the apex of the left ventricle corresponding to the wound in the pericardium, grains of powder also being found embedded in the substance of the heart.

Sir James Fayrer⁴ mentions a case of bullet wound of

the heart where the patient survived seventy-two days. The bullet was found in the apex of the left ventricle.

Tillaux⁵ exhibited at the Société de Chirurgie the heart of a woman who had survived two gunshot wounds for eighteen days, one of the missiles lodging in the left ventricle.

H. W. Boone⁶ reports a case of gunshot wound with survival for thirteen days.

Richard J. Booth⁷ reports the case of a woman who died twenty minutes after admission to the Kimberly Hospital, South Africa, suffering from penetrating wound of the pericardium and left ventricle.

James Berry⁸ reports the case of bullet wound of the heart in which the bullet passed through the cavity of the right ventricle and intraventricular septum, emerging close to the inferior vena cava, patient surviving one hour.

O. B. Beer⁹ reports the case of an old soldier who was wounded in 1861 by a small rifle-ball entering the thorax posteriorly, on the left side, between the second and third ribs, it being found embedded in the heart wall near the left ventricle, thirty-seven years later, the patient having succumbed to cancer of the arm.

G. P. Biggs¹⁰ reports a gunshot wound of the heart where patient survived three days, bullet entering the thorax inside the left nipple line.

REFERENCES.

¹ Archiv für klinische Chirurgie, Band ix, Heft 2, p. 571.

² St. Louis Clinical Record, 1876.

³ London Medical Record, 1874, p. 212.

⁴ Lancet, 1879, Vol. i, p. 658.

⁵ Canada Lancet, 1876, p. 242.

⁶ American Journal of Medical Sciences, October, 1879, p. 509.

⁷ British Medical Journal, London, 1897, Vol. ii, p. 469.

⁸ Transactions of the Pathological Society, London, 1893-4, Vol. xlv, p. 42.

⁹ Lancet Clinic, 1898, N. S., Vol. xli, p. 496.

¹⁰ Proceedings of the New York Pathological Society, 1895, 1896, p. 27.